

**Abstract of the Disclosure**

An athermal interferometric wavelocker is disclosed having a beam splitter combiner and a first arm of a first material having a first refractive index, a first length, and a first coefficient of expansion; and, a second arm of a second material having a second refractive index, a second length, and a second coefficient of expansion;. The refractive indices, lengths and coefficients of expansion of the first arm and the second arm are selected to provide a substantially athermal structure operating at ambient temperatures. The first arm and second arm have inner end faces that meet adjacent faces of the beam splitter and combiner. The first and second arms are of a different optical path length such that light launched into the beam splitter and combiner, interferes upon recombining, and is output from a combiner output port to provide a wavelocker signal having a detectable characteristic which varies with wavelength.